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Fact Sheet

Education Indicators in Canada

Economic Downturn and Educational Attainment

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Economic downturn and educational attainment

The previous article in this fact sheet series found that, in 2009, higher levels of education were typically associated with higher employment rates in Canada and across the member countries of the Organisation for Economic Co-operation and Development (OECD).[1] The period between 2008 and 2011 was a volatile time in terms of global economic performance, marked in Canada by an economic downturn that began in the fourth quarter of 2008 and was followed by a time of apparent recovery in employment after the third quarter of 2009.

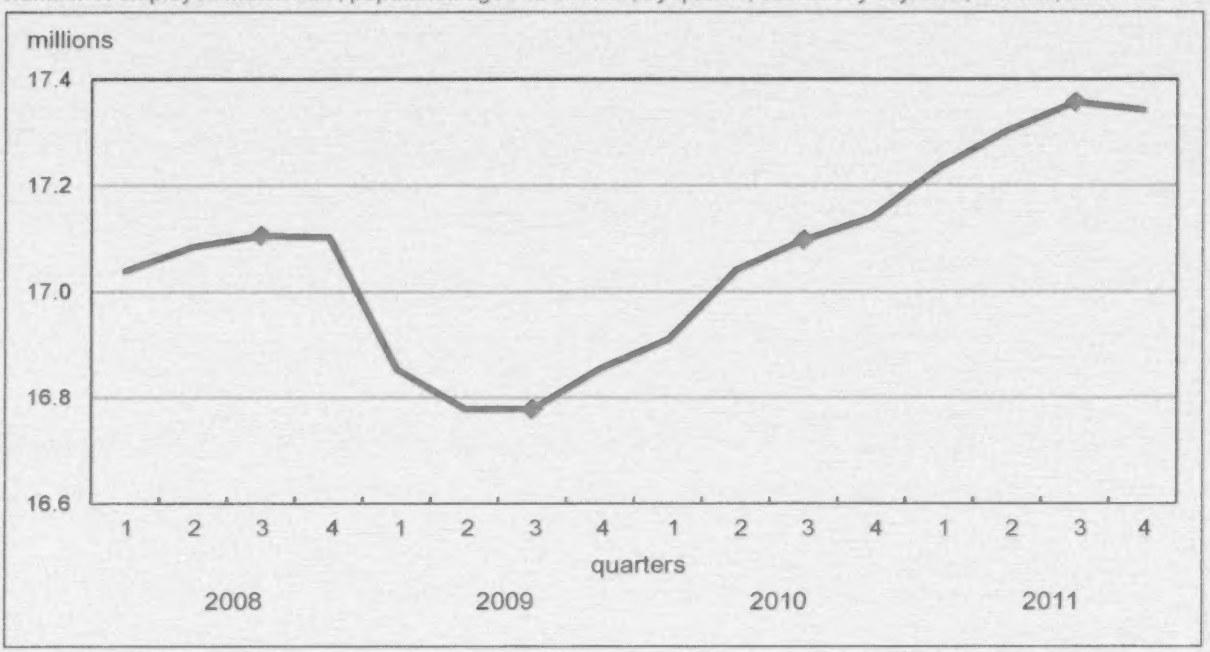
This fact sheet continues to shed some light on the relationship between education and labour market outcomes by providing a brief overview of the impact of economic changes on individuals with different levels of educational attainment to identify which groups have been most affected by the economic downturn and which have benefitted most from the recovery.[2] The 2008-through-2011 data for Canada and its provinces and territories are from Statistics Canada's Labour Force Survey (LFS) (see "About the data" for more information on the LFS).

Overall employment trends, 2008 to 2011

Canadians were not immune to the global economic downturn that took hold in 2008, although employment subsequently recovered. In the third quarter of 2008, 17.1 million people (seasonally adjusted figures) were employed (Chart 1).[3] By 2009, the number of employed individuals fell 1.9% to a low of 16.8 million. Then, by the third quarter of 2010, the number of employed individuals had recovered to the pre-downturn level and subsequently reached a new high in the third quarter of 2011, when 17.4 million individuals were employed. The employment figure for the third quarter of 2011 is 1.5% higher than that observed in the third quarter of 2008, the previous peak observed during the period covered by this fact sheet.

1. See *Educational Attainment and Employment: Canada in an International Context*, Issue number 8 in the Pan-Canadian Education Indicators fact sheet series, Statistics Canada Catalogue number 81-599-X, published in February 2012.
2. The following studies, which were consulted during preparation of this fact sheet, examine labour market outcomes across demographic groups during times of economic change in Canada and other countries: *Canada's employment downturn* by Sébastien LaRochelle-Côté and Jason Gilmore in *Perspectives on Labour and Income*, Statistics Canada Catalogue number 75-001-X, December 2009; and *Global Employment Trends Report, 2011*, International Labour Office, available at www.ilo.org.
3. The number of people employed does not provide an indication of the number of jobs held by each individual, whether the jobs are on a part- or full-time basis, nor of the quality of the jobs held.

Chart 1
Number of employed individuals, population aged 15 or older, by quarter, seasonally adjusted, Canada, 2008 to 2011



Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces, the estimates for territories are not included in the national averages.

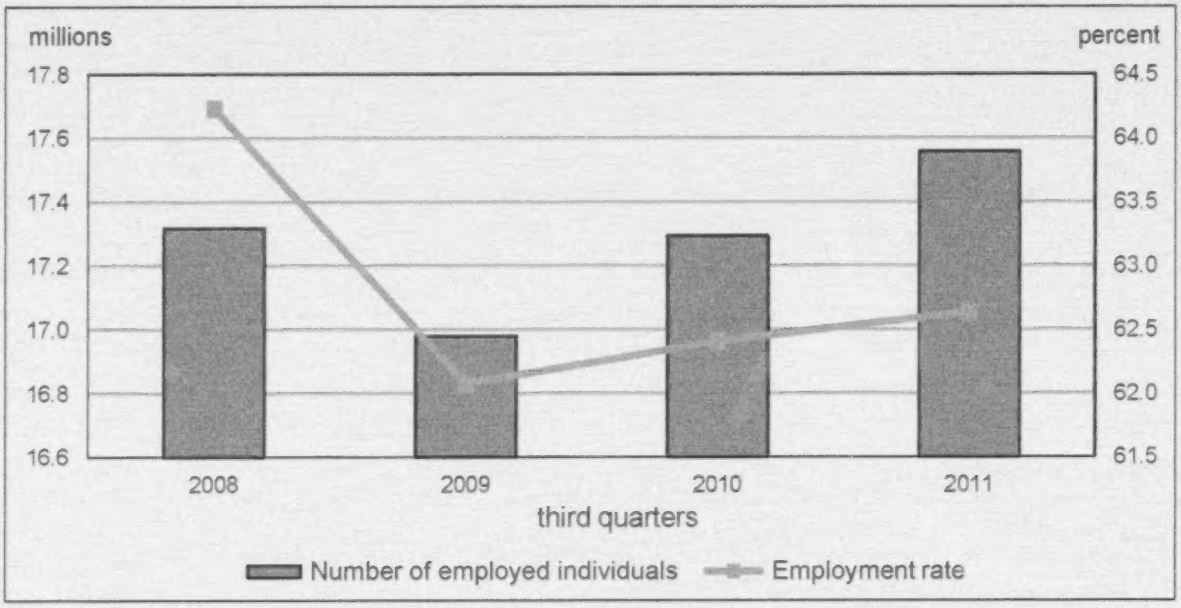
Source: Statistics Canada, Labour Force Survey

The remainder of this analysis draws on unadjusted data for four time points: the third quarters of 2008, 2009, 2010 and 2011. These represent the pre-downturn peak in the third quarter (Q3) of 2008, the downturn trough in Q3-2009, the recovery of employment levels to the pre-recession peak in Q3-2010, and the first high in Q3-2011 after the downturn (see "About the data" for more information on the use of seasonally adjusted and unadjusted data).[4]

Although the number of employed Canadians had surpassed the pre-downturn peak by 2011, the employment rate remained below that recorded in 2008.[5] In 2011, 62.6% of Canadians aged 15 or older were employed, higher than the 62.1% recorded in 2009 (the trough), but lower than the employment rate of 64.2% in 2008 (the pre-downturn peak) (Chart 2). Between 2008 and 2011, the number of persons aged 15 or older in employment increased by approximately 239,000 (1.4%), while the population that age increased by 1.1 million (4%) (Charts 2 and 3). To return to the pre-downturn peak level of the employment rate (64.2% in 2008), employment should have increased by 686,000 above the level recorded in the third quarter of 2008. Although employment has grown at a faster rate than the growth in population since 2009 (i.e., during the recovery), this has not been enough to recoup the employment losses sustained during the downturn and catch up with population growth.

4. From this point forward, the text refers to these time points only in terms of the year while the intention is that the reference is to the third quarter of each of these years.
5. The employment rate represents the percentage of the population 15 years of age or older who are employed. The employment rate for a particular group is the number employed in that group expressed as a percentage of the population for that group.

Chart 2
Number of employed individuals and employment rates, population aged 15 or older, third quarters, unadjusted, Canada, 2008 to 2011



Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

Overall employment trends, provinces and territories

The general employment pattern observed at the Canada level between 2008 and 2011 was also evident in most of the provinces and territories, with some variations in magnitude.

Chart 3
Percentage change in number of employed individuals and population aged 15 or older, third quarters, unadjusted, Canada, provinces and territories, 2008 to 2011

Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

New Brunswick is one province in which employment patterns over this period differed from that recorded for Canada overall. Decreases in the number of employed persons in New Brunswick occurred later; that is, between 2008 and 2009, the number of employed persons in New Brunswick was fairly stable, while it fell by 2% in Canada (Chart 3). However, in 2010, employment had fallen by 1% compared with 2008, and by 2011, employment had fallen by 2.3%—times during which employment was rising in Canada. The pattern in Nova Scotia is also distinctive as the province sustained employment losses between 2010 and 2011, after recording increases between 2009 and 2010.[6]

Employment patterns differed to some extent across the Prairie provinces. In Manitoba and Saskatchewan, the labour markets did not experience a decrease in the number of employed persons between 2008 and 2009, while employment numbers in Alberta decreased 2.1% (Chart 3). In all three of these provinces, however, the number of employed subsequently rebounded and was about 2% higher in 2011 than 2008, compared with an increase of 1.4% in Canada overall.

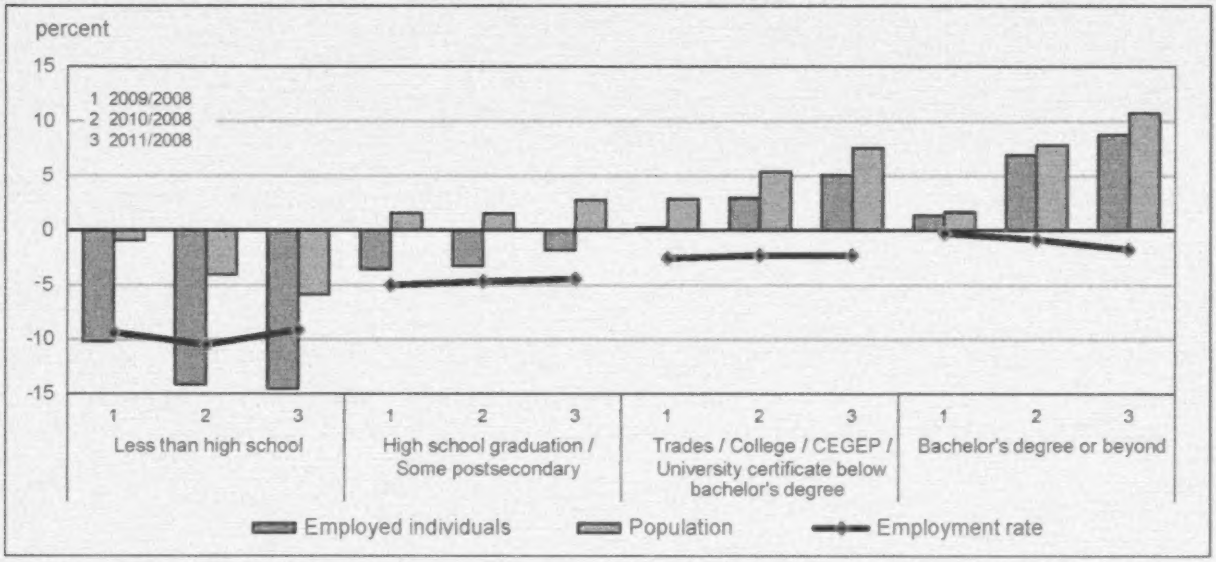
Despite the fact that the number of employed persons was higher in 2011 than in the pre-downturn peak of 2008 in most provinces and territories, employment rates were lower because this growth was not sufficient to absorb the growth in the population aged 15 or older. The exceptions were Newfoundland and Labrador and the Northwest Territories, where employment rates were higher in 2011 compared with 2008. In Newfoundland and Labrador, the higher employment rate in 2011 reflected a 1.6% increase in the number of employed, compared with 2008, whereas the population growth over this period was slightly lower, 1.1%. In terms of the actual employment rate, 54.7% of the population aged 15 and older in Newfoundland and Labrador was employed in 2011, compared with 54.4% in 2008 (data not shown). Despite this increase, the employment rate in Newfoundland and Labrador remained the lowest in Canada in 2011. The highest employment rates in Canada at that time were observed in the Northwest Territories (74.1%), Yukon (73.1%), and Alberta (70.5%). Nevertheless, rates for Yukon and Alberta in 2011 were lower than those recorded in 2008 (74.0% and 72.5%, respectively) (data not shown).

Employment trends by educational attainment

Between 2008 and 2009, the decline in the number of employed individuals at the Canada level mostly reflected net employment losses among those with less than high school graduation. During this period, the number of individuals without high school graduation who held a job decreased by 10.2% (Chart 4, period 1, 2009/2008). Those with high school graduation or some (non-completed) postsecondary education as their highest level of education were also negatively affected as their net employment fell by 3.6%. By contrast, those with postsecondary education (trades, college, CEGEP or university certificate below a bachelor's degree; a bachelor's degree or beyond) experienced more stable employment levels (Chart 4, period 1, 2009/2008).

6. In Chart 3, the data bars indicate the percentage change in the number of employed individuals between the third quarter of a year and Q3-2008. Looking at the change between adjacent bars provides information about the change in the number of employed between sequential quarters (e.g., between Q3-2009 and Q3-2010). This also is the case for the trend lines in Chart 3 with regards to change in the population aged 15 and older.

Chart 4
Percentage change in number of employed individuals, population and employment rate, population aged 15 or older, third quarters, unadjusted, by educational attainment, Canada, 2008 to 2011



Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

By 2011, employment levels had risen the most (in percentage terms) for those with a bachelor's degree or beyond, followed by those with a trades, college, CEGEP or university certificate below a bachelor's degree (Chart 4, 2011/2008). Compared with 2008, employment increased by 8.8% as of 2011 for those with a bachelor's degree or beyond, and by 5.1% for those with a trades, college, CEGEP or university certificate below a bachelor's degree. By 2011, the level of employment for people with a high school diploma or some postsecondary education had not recovered from the losses incurred during the recession, as the number of employed individuals within this education category was still 1.8% lower than in 2008. In the meantime, the population with this level of education continued to grow, although moderately (+2.7%).

In 2011, the employment level for individuals with less than high school completion was still 14.5% lower than in 2008. The labour market outcomes of these individuals with the lowest levels of education have remained poor even in the recovery despite a continued decline in the population with less than a high school diploma. The proportion of the population aged 15 or older in Canada with this level of educational attainment decreased by 5.9% (Chart 4, 2011/2008).

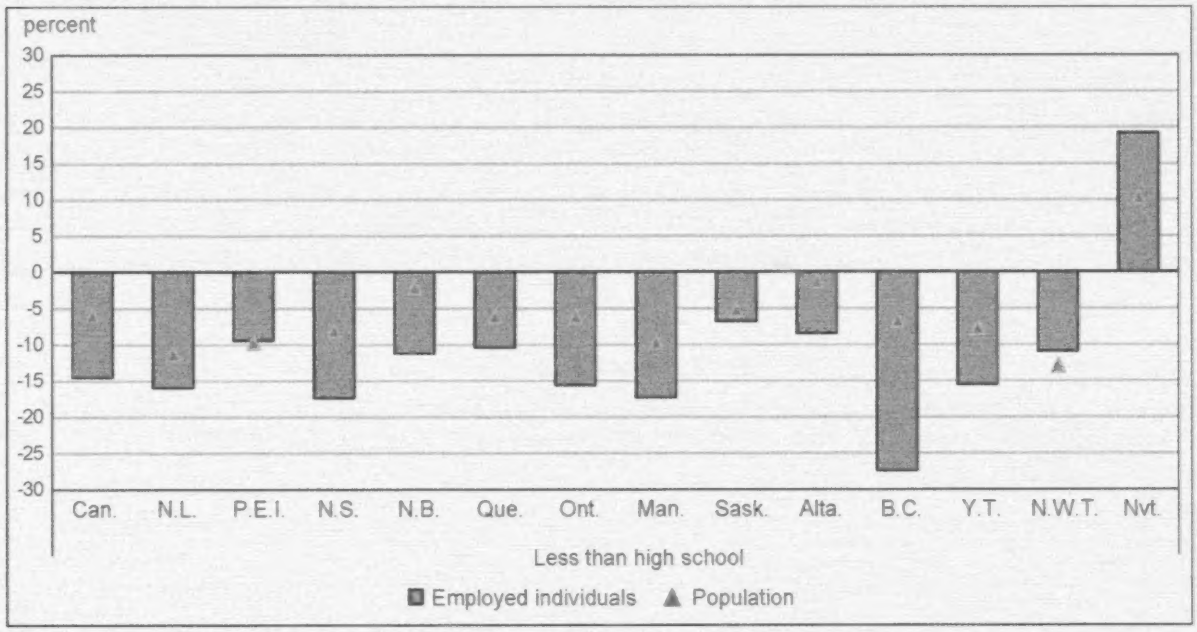
Despite the employment growth among those with a bachelor's degree or beyond, this has not been enough to absorb the growing population with these credentials in Canada. Between 2008 and 2011, the number of persons in Canada with a bachelor's degree or beyond increased by 10.7% (Chart 4). The employment rate for this group decreased by 1.3 percentage points (from 75.0% to 73.7%) (data not shown) even though the number of persons with this type of education holding jobs increased by 8.8% over the same period.

The employment rate for those with trades, college, CEGEP or university certificate below a bachelor's degree also decreased between 2008 and 2011, from 73.1% to 71.4%, despite an increase in the number of employed with this level of educational attainment (data not shown).

Employment trends by educational attainment, provinces and territories

Substantial declines in employment among the least educated, that is persons with less than a high school diploma, were widespread across the provinces and territories between 2008 and 2011. In 2011, employment among individuals in this group was lower than in the pre-downturn peak (2008) by between 6% and 10% in several provinces/territories (Prince Edward Island, New Brunswick, Quebec, Saskatchewan, Alberta, and Northwest Territories) and by 15% or 16% in Newfoundland and Labrador, Nova Scotia, Ontario, Manitoba, and Yukon. In British Columbia, employment levels for this group were down by more than one-quarter (27.4%) compared with 2008 (Chart 5.1). By contrast, Nunavut was the only jurisdiction in Canada that saw an increase—in the order of 19%—between 2008 and 2011 in the number of individuals without a high school diploma who were employed. (Information on those with high school graduation or some postsecondary education is presented in Chart 5.2.)

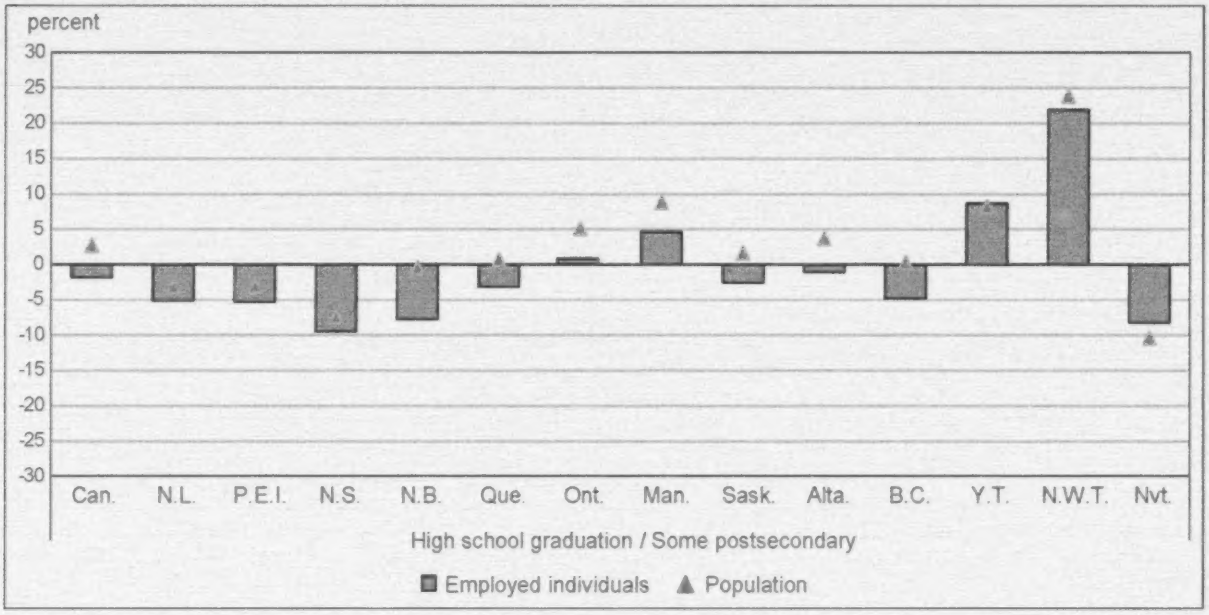
Chart 5.1
Percentage change in number of employed individuals and in population, population aged 15 or older, with less than high school, third quarters, unadjusted, Canada, provinces and territories, 2008 to 2011



Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

Chart 5.2
Percentage change in number of employed individuals and in population, population aged 15 or older, with high school graduation or some postsecondary education, third quarters, unadjusted, Canada, provinces and territories, 2008 to 2011



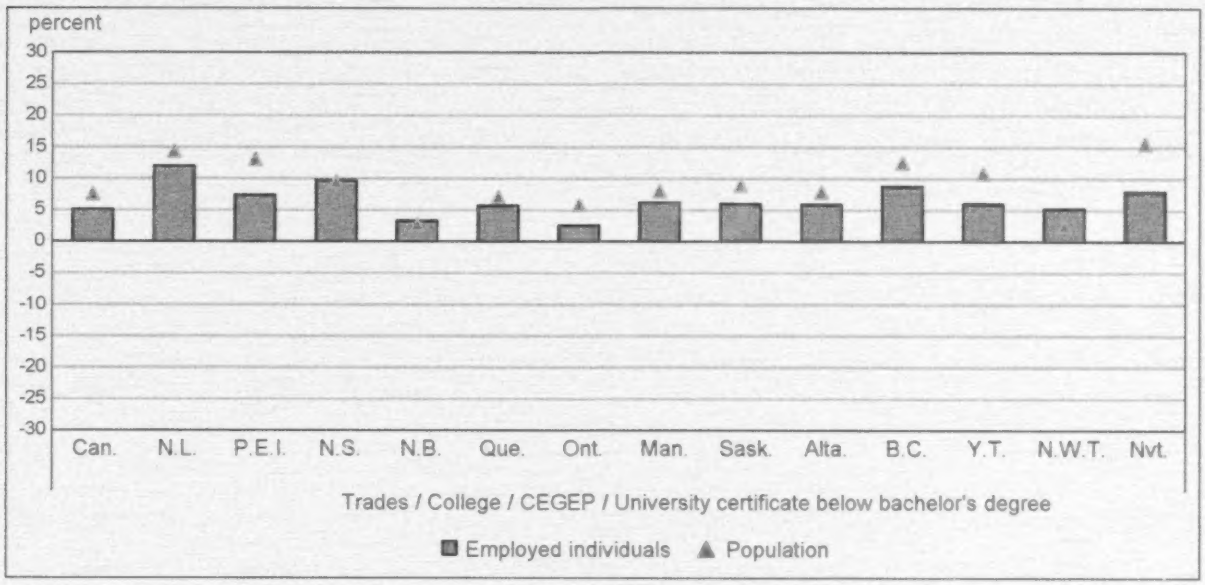
Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

The number of employed among those who completed postsecondary education was higher in 2011 compared with 2008 in almost all provinces and territories. In New Brunswick and Ontario, employment growth among those in both the trades, college, CEGEP, university certificate below bachelor's degree, and bachelor's degree and beyond categories was below the Canada results along with employment growth in Newfoundland and Labrador for those with a bachelor's degree or beyond (Charts 5.3 and 5.4).

Along with the net drop in employment for those with less than high school graduation, the population aged 15 or older with this level of attainment has decreased across the provinces between 2008 and 2011 by a range of 2% (New Brunswick) and 11% (Newfoundland and Labrador), and was fairly stable in Alberta (a 1.3% drop) between these two time points (Chart 5.1). By contrast, the number of individuals with postsecondary education has increased at a faster rate than employment among this group. The net result is a falling employment rate for the population with a postsecondary credential, which occurs across most provinces (Charts 5.3 and 5.4).

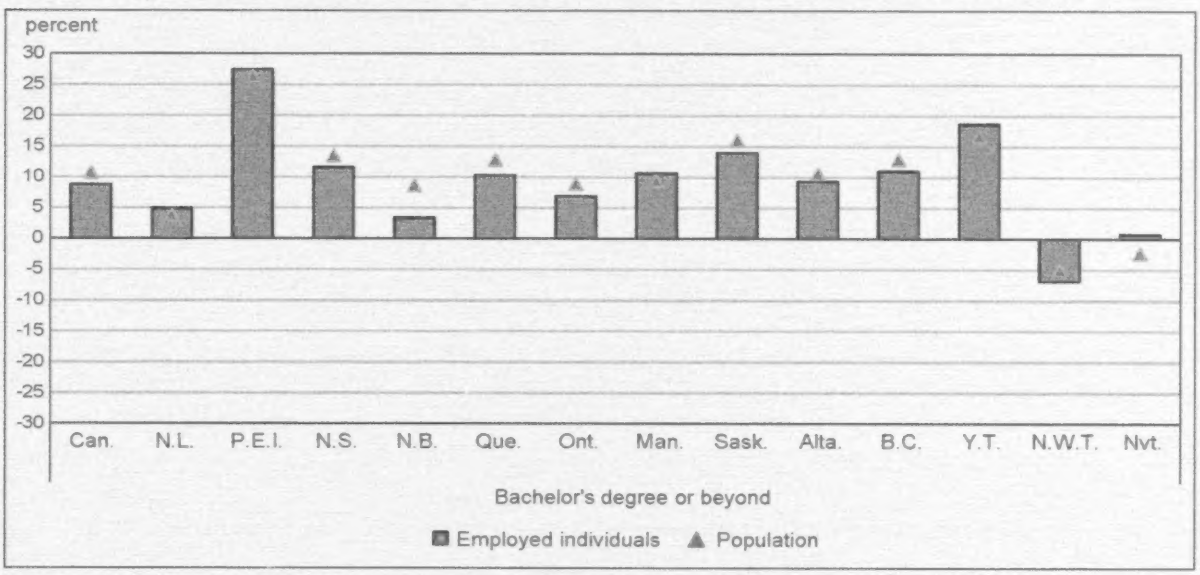
Chart 5.3
Percentage change in number of employed individuals and in population, population aged 15 or older with trades / College / CEGEP / University certificate below bachelor's degree, third quarters, unadjusted, Canada, provinces and territories, 2008 to 2011



Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

Chart 5.4
Percentage change in number of employed individuals and in population, population aged 15 or older with a bachelor's degree or beyond, third quarters, unadjusted, Canada, provinces and territories, 2008 to 2011



Note: Labour Force Survey (LFS) estimates for Canada are derived using results of the LFS in the provinces; the estimates for territories are not included in the national averages.

Source: Statistics Canada, Labour Force Survey.

Summary

During the economic downturn (2008 to 2009), the decline in the number of employed individuals at the Canada level mostly reflected net employment losses among those with less than high school graduation. Employment losses were less severe in the downturn for those with postsecondary education and their employment rates were not as negatively affected. Subsequently, the number of employed individuals among those with a postsecondary education recovered more quickly than among those without a postsecondary credential, despite a continued increase in the population with postsecondary credentials.

About the data

This fact sheet uses data for Canada and the provinces and territories from Statistics Canada's Labour Force Survey (LFS). The LFS covers persons in Canada who are 15 years of age or older, excluding persons living on Aboriginal reserves, inmates of institutions, and full-time members of the armed forces. LFS estimates for Canada are derived using results of the LFS in the provinces. Since the sample design, rotation pattern and reliability criteria are different from those in the ten provinces, estimates for the territories are not included with the Canada totals, but rather they are calculated and reported separately. With the recent increase in coverage in Nunavut (effective in the spring of 2009 and retroactive to the winter of 2008), the sample for all three territories is representative of the working-age population of each territory.

Employed persons are those who, during the LFS reference week (usually the week that contains the 15th day of the month), did any work for pay or profit (including those who worked without pay at a family business, farm or professional practice), or had a job and were absent from work.[7]

The **employment rate** represents the percentage of the population aged 15 and over who are employed. To calculate the employment rate for a group with a particular level of educational attainment, the number of employed persons is divided by the total number of persons in the population aged 15 and over who have attained the education level and then this quotient is multiplied by 100.

Educational attainment reflects the highest level of education completed. Five categories of educational attainment, as classified in the LFS, are presented:

Less than high school graduation: Did not receive a high school diploma.

High school graduation: Received a high school diploma. In Quebec, completed Secondary V. In Newfoundland and Labrador, completed fourth year of secondary.

Some postsecondary education: Worked toward, but did not complete, a degree, certificate (including a trade certificate) or diploma from an educational institution, including a university, beyond the secondary level.

Trades/college/university certificate or diploma: Completed a certificate (including a trade certificate) or diploma from an educational institution beyond the secondary level. This includes certificates from vocational schools, apprenticeship training, community college, Collège d'Enseignement Général et Professionnel (CEGEP) and school of nursing. Also included are certificates below a Bachelor's degree obtained at a university.

Bachelor's degree or above: Bachelor's degree obtained at a university or other university degree or certificate above bachelor's degree.

The employment data in Chart 1 are adjusted for seasonality. A seasonally-adjusted series is one from which seasonal movements have been statistically eliminated. Seasonal movements are defined as those which are caused by regular annual events such as climate, holidays, vacation periods, cycles related to crops production and retail sales associated with holidays such as Christmas and Easter. This adjustment allows for the comparison of employment data across months or quarters. Because seasonal patterns reoccur at roughly the same times year-after-year, it is appropriate to use non-seasonally adjusted data to compare data to the same quarter(s) or month(s) across years. Non-seasonally adjusted data have been used in Charts 2, 3, 4, 5.1, 5.2, 5.3 and 5.4, as comparisons were made across third quarters of every year. For more information on the methodology of seasonal adjustment in the labour force data, please see *Guide to the Labour Force Survey*, Statistics Canada Catalogue no. 71-543-G.

7. The definitions for the labour force concepts used in this fact sheet, including levels of educational attainment, are taken from the *Guide to the Labour Force*, Statistics Canada Catalogue number 71-543-G, March 2011 (Section 3, Dictionary of Concepts and Definitions).

Acknowledgements

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